



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/612,729

07/02/2003

Kevin T. Chan

14227US01

5781

23446 7590 11/23/2009
MCANDREWS HELD & MALLOY, LTD
500 WEST MADISON STREET
SUITE 3400
CHICAGO, IL 60661

EXAMINER

DAVENPORT, MON CHERI S

ART UNIT

PAPER NUMBER

2462

MAIL DATE

DELIVERY MODE

11/23/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/612,729	Applicant(s) CHAN, KEVIN T.	
	Examiner MON CHERI S. DAVENPORT	Art Unit 2462	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 9-14, 16, 19-24, 26 and 29-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 33, 36, and 39 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 9-14, 16, 19-24, 26, 29-32, 34-35, and 37-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-4, 6, 9, 11-14, 16, 19, 21-24, 26, 29, 31, 32, 34, 35, 37, and 38** rejected under 35 U.S.C. 103(a) as being unpatentable over Cromer et al. (US Patent Application 2004/0223462) in view of Applicant admitted prior art(APA).

Regarding **Claims 1, 11, and 21** Cromer et al. discloses a method for providing and configuring communication links, the method comprising:

determining any one usable media pair from at least three media pairs all existing media pairs (see [0023], lines the NIC finds a functional signal wires in media 103, see figure 3, at least three media pairs, see [0017], 4-pair (8 wire) CAT 5 cabling suitable for use in 10, 100, and 1000 Mbps Ethernet systems as specified in IEEE 802.3. Such systems include 10BaseT4, 100BaseT4, and Gigabit Ethernet systems, therefore a useable pair is determined from at the at least three pairs of all):

wherein the device communicates using at least three media pairs of said all existing media pairs(see figure 3, see[0032], the 4 pair media device)

Cromer et al fails to specifically point out selecting any one channel from all existing channels, assigning said selected any one channel to said any one media pair as claimed.

Art Unit: 2462

APA teaches selecting any one channel from all existing channels (see [04], lines 1-6, auto-MDIX reconfigure channels to properly reassign the media pairs to channels, therefore a channel is determined from all existing channels, see also [12], and fig. 1, the first controller and the second controller is independent and all existing channels for each controller is independent); and

assigning said selected any one channel to said any one media pair(see [04], lines 1-6, auto-MDIX reconfigure channels to properly reassign the media pairs to channels).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine Cromer et al. invention with APA invention because Cromer et al. improves automation in Ethernet LAN's by extending the auto-negotiate process to include a gigabit functional verification when the auto-negotiate process negotiates a gigabit data rate for a particular connection (see Cromer et al. [0015], lines 1-5).

Regarding **Claims 2, 12 and 22** Cromer et al. in view of applicant's admitted prior art discloses everything as claimed above (see claims 1, 11 and 21). In addition, the method includes:

APA teaches wherein said determining further comprises monitoring at least said any one usable media pair (see APA [06] lines 1-4, Ethernet@wirespeed is adapted to detect the conditions on the media and the coupling interface, media pairs are monitored).

Regarding **Claims 3, 13 and 23** Cromer et al. in view of applicant's admitted prior art discloses everything as claimed above (see claims 2, 12 and 22). In addition, the method includes:

Art Unit: 2462

APA teaches wherein said monitoring further comprises detecting an existence of a communication signal on said any one usable media pair (see APA [06], lines 1-9, Ethernet@wirespeed is used when channel or media characteristics have degraded, therefore usable media pairs are monitored in order to adapt and mitigate the problem).

Regarding **Claims 4, 14 and 24**, Cromer et al. in view of applicant's admitted prior art discloses everything as claimed above (see claims 1, 11, and 21). In addition, the method includes:

APA teaches further comprising determining which one of said all existing media pairs facilitate communication at a maximum communication speed (see APA [06], Ethernet@wirespeed is useful when channel or media is degraded, Ethernet@wirespeed automatically shift to maximum communication speed).

Regarding **Claim 6, 16, 26**, Cromer et al. in view of applicant's admitted prior art discloses everything as claimed above (see claims 1, 11, and 21). In addition, the method includes:

APA teaches further comprising determining which one of said all existing media pairs facilitates operating at a reduced communication speed (see APA [06], Ethernet@wirespeed is useful when channel or media is degraded, Ethernet@wirespeed automatically shift or reduce transmission speed).

Regarding **Claims 9, 19, and 29**, Cromer et al. in view of applicant's admitted prior art discloses everything as claimed above (see claims 1, 11, and 21). In addition, the method includes:

Art Unit: 2462

APA teaches further comprising identifying a status of at least one of said all existing media pairs and at least one of said all existing channels (see APA [06] lines 1-4, Ethernet@wirespeed is adapted to detect the conditions on the media and the coupling interface, media pairs are monitored).

Regarding **Claims 31, 32, 34, 35, 37, and 38** Cromer et al. in a method for providing and configuring communication links of a device, the method comprising:

determining any one usable media pair from at least three media pairs of all existing media pairs((see [0023], lines the NIC finds a functional signal wires in media 103, see figure 3, at least three media pairs, see [0017], 4-pair (8 wire) CAT 5 cabling suitable for use in 10, 100, and 1000 Mbps Ethernet systems as specified in IEEE 802.3. Such systems include 10BaseT4, 100BaseT4, and Gigabit Ethernet systems, therefore a useable pair is determined from at the at least three pairs of all):

determining which one of said all existing media pairs facilitates communication at a maximum(reduced) communication speed(see[0015], the auto negotiate process negotiates a gigabit data rate for a particular connection); and

cross-connecting said selected any one channel to said one of said all existing media pairs that facilitates communication at a maximum(reduced) communication speed, wherein the device communicates using said at least three media pairs of said all existing media pairs(see [0023], the NIC reroutes the signals it produces to the functional signals wires , enabling to continue operation, even at a reduced rate, see also [0032], the invention allows the 4 pair cat 5 wiring to

Art Unit: 2462

continue operation at speeds of up to 100Mbps even if 50% of the media signals are non-functional)

Cromer et al. fails to specifically point out selecting any one channel from all existing channels, assigning said selected any one channel to said any one usable media pair as claimed.

APA teaches selecting any one channel from all existing channels(see [04], lines 1-6, auto-MDIX reconfigure channels to properly reassign the media pairs to channels, therefore a channel is determined from all existing channels , see also [12], and fig. 1, the first controller and the second controller is independent and all existing channels for each controller is independent);

assigning said selected any one channel to said any one usable media pair(see [04], lines 1-6, auto-MDIX reconfigure channels to properly reassign the media pairs to channels);

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine Cromer et al. invention with APA invention because Cromer et al. improves automation in Ethernet LAN's by extending the auto-negotiate process to include a gigabit functional verification when the auto-negotiate process negotiates a gigabit data rate for a particular connection (see Cromer et al. [0015], lines 1-5).

3. **Claims 10, 20, and 30** rejected under 35 U.S.C. 103(a) as being unpatentable over Cromer et al. in view of Applicant's admitted prior art in further in view of Bontemps et al. (US Patent Number 5,923,663).

Art Unit: 2462

Regarding **Claims 10, 20, and 30**, Cromer et al. in view of applicant's admitted prior art discloses everything as claimed above (see claims 9, 19, and 29). In addition, the method includes:

However Cromer et al. in view of applicant's admitted prior fail to specifically point out further comprising storing said identified status as claimed.

Bontemps et al. teaches storing said identified status (see column 3, lines 50-52, the physical layer device monitors its receive input for transmitted communication signals and provided a link detect signal indicative thereof, which reads on storing of status, see also col. 13, lines 30-45, the LINK_DETECTx signals are used in a logic state machine, which stores current state of the ports).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine Cromer et al. in view of applicants admitted prior art with Bontemps et al. because Bontemps et al. invention provides a solution to achieve the appropriate communication link automatically regardless of cable type (see Bontemps et al. col. 3, lines 39-41).

Allowable Subject Matter

4. **Claims 33, 36, and 39** allowed.

Response to Arguments

5. Applicant's arguments filed 7/13/2009 have been fully considered but they are not persuasive.

Art Unit: 2462

In the remarks on pgs. 18-20 of the amendment, the applicant contends that Combination of Cromer and APA does not teach or suggest “determining any one usable media pair from at least three media pairs of all existing media pairs”

Examiner respectfully disagrees Cromer teaches a media device with three or more media pairs in figure 3, which a usable pair is determined from all existing media pairs, which reads on the claim language.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MON CHERI S. DAVENPORT whose telephone number is (571)270-1803. The examiner can normally be reached on Monday - Friday 8:00 a.m. - 5:00 p.m. EST.

Art Unit: 2462

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin C. Harper/
Primary Examiner, Art Unit 2462

/Mon Cheri S Davenport/
Examiner, Art Unit 2462
November 10, 2009